



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,127	11/12/2003	L. Terry Boatman	SOF153/143706	7684

7590 11/29/2004

GARY L. BUSH  
ANDREWS & KURTH, L.L.P.  
SUITE 4200  
600 TRAVIS  
HOUSTON, TX 77002

EXAMINER

BASINGER, SHERMAN D

ART UNIT	PAPER NUMBER
----------	--------------

3617

DATE MAILED: 11/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/712,127

Applicant(s)

BOATMAN ET AL

Examiner

Sherman D. Basinger

Art Unit

3617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-14 is/are allowed.
- 6) ☒ Claim(s) 1-4, 15-17 and 19 is/are rejected.
- 7) ☒ Claim(s) 5-10, 18, 20 and 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/12/03; 12/3/03
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: IDS 6/10/04

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the winch 48 of claim 11, the elastomeric flex joint of claim 20 and the internal vertical axis yaw bearing of claims 20 and 21 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

2. The status of serial number 10/636994 filed August 6, 2003 should be kept current on page 6, line 17 of the specification.
3. A brief description for figures 4A, 4B, 5A, 5B, 6A, 6B, 7A, 7B, 8A, 8B, 9A, 9B, 11A, 11B, 12A, 12B, 13A, 13B, 14A and 14B is required.

***Claim Objections***

4. Claims 11 and 12 are objected to because of the following informalities: in claim 11 "said guide rope" and "said windlass (18)" have no clear antecedents; and in claim 12 line 3 "(119)" should be -(11a and 11b)-. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Nion et al in view of Hasebe et al.

O'Nion et al discloses an assembly for mooring a vessel (12) at sea to a body (1) comprising

a yoke (3) selectively disconnectably coupled between said vessel (12) and said body (1) and having first and second ends with a non-disconnectable coupling arrangement 2 between said first end and said body and a disconnectable coupling arrangement between said

second end and said vessel 12,  
said non-disconnectable  
coupling arrangement including a pivoted connection 2  
between said first end of said yoke (3) and said body (1) that allows said yoke to rotate  
about a horizontal axis,  
said disconnectable coupling arrangement including a first coupling member (9)  
at said second end of said yoke which is arranged and designed for mating with a  
second  
coupling member (14) carried by said vessel (12), and  
a tension member (16) arranged and designed to extend through said first and  
second coupling members and to be coupled between a winch mechanism (see column  
6, line 18) and a  
connector (inherently present in vessel 12), said mechanism and connector being  
arranged and designed to pull said  
first coupling mechanism (9) into engagement with said second coupling mechanism  
(14).

O'Nion et al does not clearly disclose a selectively operated locking mechanism  
arranged and designed between said  
first and second coupling members to lock said yoke to said vessel, thereby  
mooring said vessel (12) to said body (1) or to unlock said  
yoke (3) from said vessel (12)  
thereby allowing said tension member (16) to be uncoupled from said connector for

disconnecting said yoke (3) from said vessel (12).

Hasebe et al discloses locking mechanisms 38, 46, 48, 54 and 52.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to provide first coupling member 9 of O'Nion et al with a locking mechanism similar to 38 of Hasebe et al and second coupling member 14 of O'Nion et al with a locking mechanism similar to 46, 48, 54 and 52 of Hasebe et al to lock the first and second coupling mechanisms and members together. Motivation is to more securely attach the yoke 3 of O'Nion to the vessel 12.

Because claim 2 does not define the specifics of either the LNG process vessel or the LNG carrier vessel, vessel 12 of O'Nion et al is considered to be a LNG carrier vessel and body 1 is considered to be an LNG process vessel.

Member 9 of O'Nion et al is a male cone mounted on a multiple axis joint 6, 7 and member 14 of O'Nion et al is a female receiver 14 mounted on an extension of the vessel and arranged and designed to receive a guide cone.

7. Claims 3, 15-17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Nion et al and Hasebe et al as applied to claim 1 above, and further in view of d'Hautefeuille.

O'Nion et al does not disclose a buoyant element located at said second end of said yoke (3) to cause said

Art Unit: 3617

second end of said yoke (3) not to sink when said first and second coupling members are selectively disconnected and said second end of said yoke (3) rotates about said horizontal axis into the sea.

Note the buoy 9 of d'Hautefeuille.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to provide a buoy similar to 9 of d'Hautefeuille to the second end of the yoke 3 of O'Nion et al. Motivation to do so is to maintain a stress in the chains mooring the vessel 12 of O'Nion et al. See column 4, lines 25-30 of d'Hautefeuille.

With regard to claims 15-17 and 18, the first vessel is 12 of O'Nion et al, the second vessel is 1 of O'Nion et al, the yoke is 3 of O'Nion et al, the pivotal connection is 2 of O'Nion et al, the buoyant element is similar to buoy 9 of d'Hautefeuille, the first coupling member which is a male guide cone is 9 of O'Nion et al, the second coupling member which is a female receiver is 14 of O'Nion et al, the locking mechanism is similar to 38, 48, 52 and 54 of Hasebe et al, the tension member is 16 of O'Nion et al, the winch mechanism mounted on the second vessel is disclosed in O'Nion column 4, line 18 and the extension is 13 of O'Nion.

***Allowable Subject Matter***

Art Unit: 3617

8. Claims 11-14 are allowed. Claim 11 and the claims depending therefrom are allowed over the art of record each taken alone or in combination in view of the following limitations:

providing a messenger rope (17) wound on a winch (48) on said vessel (2), connecting said messenger rope (17) to said pull-in rope (40) and pulling said messenger rope (17) and said pull-in rope (40) until said tension member (20) is within said receiver (34), clamping said tension member (20) in said receiver (34), winding said tension member (20) on said windlass (18), thereby pulling said second end of said yoke (10) upward from the sea while pulling said guide cone (32) into said receiver (32) on said extension member (8).

9. Claims 5-10, 18, 20 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Boatman et al and Boatman are cited to show the mooring system of figure 3. EP 1 283 159 is cited to show the mooring system of figure 4. EP 1 308 384 is also cited to show the mooring system of figure 4.

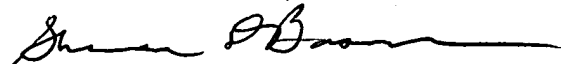
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sherman D. Basinger whose telephone number is 703-308-1139. The examiner can normally be reached on M-F (6:00-2:30 ET).



Art Unit: 3617

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samuel J. Morano can be reached on 703-308-0230. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Sherman D. Basinger  
Primary Examiner  
Art Unit 3617  
11/21/04

sdb  
11/22/04